however. Wholegrain bread was produced by nearly a quarter of German bakers by 1943, compared to only 1% in 1939, fol-
lowing appeals from the health Führer Len-
onardo Conti that wholegrain bread should be eaten "for the benefit of individual health and
National Health."

The legacy of healthy eating campaigns are even less easy to discern than those of the
anti-smoking campaigns. Germany has an overall mortality which was far more
favourable given its high gross national produc-
t and Nazi campaigns against alcohol,
smoking, against animal fat, and in favour of fruit and vegetables, wholemeal bread — which were targeted particularly at the same youth who are now the
New generation contributing substantially to
national mortality rates — had no discernible
long term impact. Indeed the postwar legacy may have been unfavourable, with the Prasi-
weile (‘wave of guzzling’) which followed the
depravations of war having adverse conse-
quences with respect to obesity and obesity
related diseases.16

Fertility

Proctor also comments on our reference to
Martin Gumpert, who intimated that the Nazi
campaigns to increase fertility were failing.
Gumpert managed to escape from Germany before 1933, and did much to advertise the level of misery in Hitler’s state. His book Hail Hunger had been an attempt to demonstrate that a popular contemporary idea, that the Nazi had improved health in Germany — was in-
correct. The book was widely quoted outside of Germany and appears to have been an effective intervention. When discussing the
fertility campaign Gumpert was referring to the later stage of the “battle for births”, rather
than its early days. As Proctor points out there was an increase in the birth rate and
marriage rate immediately following the im-
position of the Nazi rule. The birth rate in-
creased from 15.1/1000 in 1932 to 18.9/1000 in 1936.11 But, this should be seen against the
decline which preceded it. From a rate of
35.6/1000 in 1900 the fertility rate declined to
31.6/1000 in 1910, 26.8/1000 in 1914, 20.3/1000 in
1925, and by the early 1930s it had reached an
time low.12 Seen in this light the “success” of
the pronatalism campaign was modest.13

Interest-free marriage loans were offered from 1933, 1934, and did much to advertise the
interests of health and eugenic reliability. Family
allowances, with one-off payments at the birth
of each child, were followed by the in-

troduction of recurrent grants, initially with
the child, and propaganda intended to
encourage working women to return to
the home to raise children.14 Increasing legal
sanctions against abortion were imposed, culminating in the death penalty being introduced for habitual assistance at abor-
tions.15 In the light of these activities, the last
of which would increase the birth rate by fiat
rather than winning the propaganda war, the
cessation of any sustained rise in
fertility can be seen as the basis for Gumpert’s consideration that German mothers “had
gone on strike”. Gumpert commented cyn-
ically on a large number of Nazi social policy.
He considered that attempts to claim
that poor health was due to bad lifestyle was
serving as a smoke screen, to cover up for
the genuine decline in life expectancy in
children due to the incitement of Nazi policies. Thus he considered the
then campaigns to reduce fat con-
sumption during a period of hunger were
particularly inviolate, stating, “there emerge
today health administrative hyenas who pro-
claim to the public that butter is poison.”

Lack of support

The anti-smoking campaigns in Nazi Ger-
many, extensive as they appeared, did not en-
gage the unquestioning support which might
have been expected for activities seen to be
full in line with the Führer’s wishes. When
the Deutscher Bund Zur Bekämpfung der
Tabakgriesverkaufes . For a president it
received a stream of letters from potential
candidates stating that they would not take
up the post. The reasons given included the
invited individual admitting to be a “pas-
sion smoker”. Even letters from the feared
Nazi labour chief, Fritz Sauckel, received the
same response. When Karl Astel, rector of
Jena University and head of the Institute for
the Struggle against the Dangers of Tobacco,
tried to have the bodies of all deceased
smokers sent to the Jena Pathology Institute
for investigation of the damage that smoking had induced, public opposition required the withdrawal of the procession within two
months of it being issued. The military were
also opposed to restrictions on tobacco and
this may have led to a lessening of the degree
at which anti-smoking legislation was
enforced.14

Legacies of Nazism

The legacies of Nazism in contemporary Ger-
many are complex and contradictory.16 A
motivated systematic rejection of the Nazi period can be seen in everything from functional
architecture, the staid and apolitical nature of
universities and television, the desire for
press freedom even when it produces
the embarrassment that is Hild (Europe’s biggest
selling newspaper, which can on occasions
make the English Sun read like New Left
Review), and consensus Government, through to the more extreme and obvious
counter-reaction to the Nazi past by the
Baader-Meinhof Group and Red Army
Faction,17 or the alternative living situations
in squats of many German cities of the
Ausstieg and Sponti. Some commentators consider
that throughout it all an intense sense of
formality remains.18 With these contradictions, the
direct translation of policies enacted dur-
ing the Nazi period into what has happened in
Germany since the war is problematic, but
then again so is simply ignoring history.11

G DAVEY SMITH
Department of Social Medicine, Garsen Hall, Whiteladies Road, Bristol BS8 2PR

SA STROBELE
Institute of Medical Sociology, University of Hamburg, Hamburg, Germany

M EGGERT
Department of Social and Preventive Medicine, University of Bern, Bern, Switzerland

A travel grant from the Wellcome Trust allowed inspection of relevant archives, including those of
the Institute for the Struggle against the Dangers of Tobacco and the Baader-Meinhof Group. We thank
Anne Rennie for help in preparing the manuscript.

1 Proctor R. Racial hygiene: medicine under the Nazis. Cambridge, Massachusetts: Harvard University

2 Davey Smith G, Egger M. Smoking and health promotion in Nazi Germany. J Epidemiol Community


4 Lee PN. Tobacco consumption in various countries. 4th Ed. London: Tobacco Research Council,
1975.

5 World Health Organisation. World Health Stat-
tistics Annual 1987. Geneva: World Health Or-


7 Gressert M. Halt hunger, attack your Hitler. London: George Allen and Unwin Ltd, 1940.


9 Wilkinson RG. Unfair shares. Ilford: Essex: Bar-
nard’s, 1993.


12 David HP, Fleischhacker J, Höhn C. Abortion and eugenics in Nazi Germany. Population and

13 Quine MS. Population policy in 20th-century

14 Mason T. Women in Germany, 1925–1940. In:
Mason T, Nazism, fascism and the working class.

15 Kudlien F. The German response to the birth-
rate problem during the Third Reich. Con-
clusion and change 1945–52. 1975.

16 Vague T. ‘Euroterrorism’: ‘Well, it’s better

17 Brenner H. A birth cohort analysis of the smok-
ing epidemic in West Germany. J Epidemiol
Community Health 1993;47:54–8.

18 Davey Smith G, Egger M. Smoking and health
promotion in Nazi Germany. J Epidemiol Com-

Estimating life expectancy using an age–cohort model: a critique

Sir — In a recent article published in this
journal, Lee and Hsieh1 proposed using the
age–cohort model suggested by Chandler
and Schillers2 to estimate cohort mortality
and cohort life expectancy at birth. They
applied it to estimate the cohort life expectancy in
Taiwan. The model is a multiplicative Poisson
function, an age effect term, and a cohort effect term. It
does not include an interaction term. As such,
the model assumes a constant age pattern of
mortality across cohorts.2

I have great reservations about this implicit
assumption. Child and adult mortality are
subject to different factors. On one hand,
during the epidemiologic transition, commu-
nities have encountered a decline faster than
does not include an interaction term. As such,
the model assumes a constant age pattern of
mortality across cohorts.2

I have great reservations about this implicit
assumption. Child and adult mortality are
subject to different factors. On one hand,
during the epidemiologic transition, commu-
nities have encountered a decline faster than
non–communicable diseases. Besides, most
public health measures in developing coun-
tries after the second world war focused on
improving maternal and child health.3 There-
fore, the lack of mortality generally declined faster
than adult mortality. On the other hand,
however, we expect that in countries whose mor-
tality level is already very low, further
mortality declines will be concentrated in
older ages because of the law of diminishing
marginal returns. So there is no reason to
presume a constant age pattern of mortality.

In their study of the incidence of bladder
cancer, among men born in Britain, Claxton
and Schillers3 justified their application of
the model graphically by showing that the
cohort curves of logistically transformed,
with specific incidence rates, were “quasi–
parallel” to one another. However, the
determinants of a single disease are not as
diverse as those of all–cause mortality; the
study of adenocarcinoma of breast. The quasi–parallel is
likely to occur in the context of Lee and
Hsieh’s application.1

Figure 1 plots some of the data which appears in
Lee and Hsieh’s paper. Not surprisingly, for the cohorts born earlier this
century, the mortality curves are reasonably
parallel in adulthood and old age. The two

1 Proctor R. Racial hygiene: medicine under the Nazis. Cambridge, Massachusetts: Harvard University

2 Davey Smith G, Egger M. Smoking and health promotion in Nazi Germany. J Epidemiol Community

3 Claxton M, Schillers AF. Mortality and cancer in

4 Lee PN. Tobacco consumption in various countries. 4th Ed. London: Tobacco Research Council,
1975.
post war cohorts have an almost identical mortality level in the age range 15-29, but the 1961 cohort has much better child mortality level. Due to the lack of an interaction term, the model would overestimate child mortality in the 1961 cohort and underestimate its adult mortality level in relation to the 1951 cohort's. Note that child mortality is more heavily weighted in the calculation of life expectancy since it affects the number of person-years lived in all subsequent age intervals. In contrast adult and old age mortality affect fewer intervals. Therefore, the estimates of life expectancy at birth based on the age-cohort model may be biased. We should not read too much into figure 1 because the data are scanty. Nor should we overlook it because it is consistent with our epidemiological knowledge.

Obviously the age-cohort model cannot accommodate an interaction term because of the missing data for some cells. Therefore, its use should be limited to the age ranges and/or cohort ranges for which we expect the assumption of constant age pattern to hold. For instance, we can apply it to the estimation of life expectancy at age 60 with reasonable confidence. Of course, the assumption must be empirically checked whenever possible.

YIN BUN CHEUNG
Institute for Human Services Research, PO Box 73815, Kowloon Central Post Office, Hong Kong


Reply

Dr Cheung points out correctly that the age-cohort model we used to estimate cohort life expectancy in Taiwan has an implicit assumption of constant age pattern across cohorts. Dr Cheung also explains why such an assumption is unlikely to be met, especially in a population under epidemiologic transition. I fully agree with his views.

In the context of age-period-cohort analysis, the problem of non-parallelism in age patterns has been explicitly addressed. Unfortunately, the proposed methodologies are a bit too complex for the present purpose. Therefore, we break down the all-cause data into their component causes, modelled separately and then combined -- an approach suggested in our paper. Clearly, such an approach pays due respect to the different roles of communicable and non-communicable diseases during the epidemiologic transition. However, the benefits we gain from these more "sophisticated" approaches must be weighed against what we can infer from "crude" but "simple" age-cohort modelling as shown in our paper.

Finally, Dr Cheung has stated that the assumption of parallelism is not met in our data after the 1961 cohort. I wish to point out that we also refute the results after 1961, though for a different reason.

WEN-CHUNG LEE
Graduate Institute of Epidemiology, National Taiwan University, Taiwan

2 James IR, Segal M. On a method of mortality analysis incorporating age-year interaction. Also, simple addition to prostate cancer mortality. Biomarkers 1982;38:43-45

Tuberculosis among homeless people at a temporary shelter in London

SIR -- Each year the charity Crisis sets up temporary Christmas shelters, not for "the homeless" but for homeless people. Kumar et al use the former term on 23 occasions in their report of a chest x ray screening programme.

Issues of concern were the high prevalence of tuberculosis and suboptimal management of known and presumed cases due to patient "inertia". These problems have been previously documented in a very similar group of homeless people in London during the mid 1980s. In the earlier survey, there was a notable association between tuberculosis and alcohol (ab)use, which may have an impact on treatment compliance. Data from the Crisis Open Christmas could perhaps be used to ascertain whether there was an association between "loss to follow up" and accommodation status of "no fixed abode" or self-reported "regular alcohol consumption".

The documented health care needs of single, homeless, or homeless and roofless people are multiple. The prevalence of mental illness noted by Kumar et al, low by comparison with other survey data, may have been significantly underestimated by selection or reporting bias.

A comparatively wide range of accessible and acceptable health care provision therefore seems appropriate and is, indeed, a feature of most dedicated services for homeless people. Recommendations to improve current provision, based on specialist outreach respiratory/tuberculosis services, will have limited capacity to address important and potentially confounding morbidity.

The most effective means of delivering comprehensive health care to homeless people, including case finding and management of those with tuberculosis and their contacts, needs formal evaluation. However, the views of professionals in primary and community health services and in the voluntary sector, who best understand the motivating factors and influential social networks of homeless people, should not be overlooked. Indeed, the suggestion of patient held records was recently raised in The Big Issue.

MAGGIE HARDING
NIKKI BROWN
West London Initiative on Single Homelessness (WISH), 17 Whiston Demo, Holloway, Middlesex TW5 3JN

3 Shanky NJ. Medical morbidity of the homeless. J Epidemiol Community Health 1988;42:181-86
8 El Kabir DJ. Great Chapel Street Medical Centre. BMJ 1987;284:698-9
10 The Big Issue 1996;170:25.

Y B Cheung

*J Epidemiol Community Health* 1997 51: 210-211
doi: 10.1136/jech.51.2.210

Updated information and services can be found at: [http://jech.bmj.com/content/51/2/210.citation](http://jech.bmj.com/content/51/2/210.citation)

**Email alerting service**

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

**Notes**

To request permissions go to: [http://group.bmj.com/group/rights-licensing/permissions](http://group.bmj.com/group/rights-licensing/permissions)

To order reprints go to: [http://journals.bmj.com/cgi/reprintform](http://journals.bmj.com/cgi/reprintform)

To subscribe to BMJ go to: [http://group.bmj.com/subscribe/](http://group.bmj.com/subscribe/)